



# The RELAY)))

JUNE 2019

The Official Publication of the Arrowhead Radio Amateur Club

A.R.A.C. Inc. P.O. Box 7164 Duluth MN 55807-7164 <http://www.thearac.org> Dues: Member \$20/Family \$25

## INDEX

ARRL Field Day	1
Board Mtg Minutes	2-4
Club Mtg Minutes	5-8
Silent Key	9
Northland Weather Net	9
MARS	10
Prez Sez	11
Contest Calendar	12
CW Abbreviations	13
Band Plan	13
Nets	14
Upcoming Events	15
Repeaters	16
Membership	17
Calendar	18
Committee Chairs	19
ARRL Field Day	22
Historical Rule Changes	

## ARRL FIELD DAY : A Look Back in History

By Steve Waller KEØNQ T  
& Kim Waller KEØNQ S

Eighty-six years ago, an experimental contest called Field Day was announced in a simple, one-column format of plain text in the June 1933 issue of QST with the headline of "International Field Day – June 10-11". Since 1915, the Amateur Radio Relay League published the journal, which ham radio enthusiasts eagerly embraced as the go-to source for the latest information on this captivating hobby. The International Field Day event plan was this: For 27 hours, beginning the second Saturday in June at 4 p.m., hams were to go into "the field" and set up portable stations.

A.R.R.L Communications Manager Francis Edward Handy W1BDI, wrote this description:

"Clubs, 56-mc. Operators, all hams with licenses for portable stations, attention!! All U.S.A. and Canadian station owner are invited to schedule 'field activities', excursions with concentrated operation of portable transmitters and receivers. Only portable stations, actually in the field, away from the 'home' address are eligible to submit field day scores.

The object will be for each 'portable' station to work as many other amateur stations as possible—each to count one point toward a score. Any or all amateur frequency bands may be used, voice or c.w. telegraph likewise."

Addition scoring was explained. A credit would be given of 2 points for each contact with another portable station and 3 points for "two-way work with a foreign station. In addition, to which each foreign country prefix may be added to the number of Sections to increase the multiplier.

"All amateurs with licensed portable stations are invited to take part. Each such

station will please report its power and frequency band used, and its log of operation and score for the period given, within the week following Field Day."

Handy expressed his hope for this contest to be the beginning of a tradition by saying, "Besides offering an



Francis Edward Handy, W1BDI QSO Card  
1940 8<sup>th</sup> Annual ARRL Field Day

Continued on Page 20



Join us on facebook!

Co-Editors:

Kim & Steve Waller

Kim - KEØNQ S • Steve - KEØNQ T

KEØNQ S.mn@gmail.com  
KEØNQ T@gmail.com

# PRESIDENT




**NØVRM**  
Gene Ellefsen  
371Ø Chambersburg Ave  
Duluth, MN 55811  
218-39Ø-3272  
lspitech@mail.com

# VICE PRESIDENT




**NØPDG**  
Mike Lovold  
386Ø Birchwood Rd  
Downtown Arnold, MN  
558Ø3  
lovoldm@gmail.com

# SECRETARY



**NØCALL**  
Robin Davis  
  
218-391-3Ø77  
davisfam2858@yahoo.com

# TREASURER




**KEØNIT**  
Bruce Carlson  
9Ø6 Anderson Rd  
Duluth, MN 55811  
763-315-2967  
carlsbr@gmail.com

# 3RD YEAR BOARD

**KD9ABS**  
Gary Minter  
1621 N 26th St  
Superior WI 5488Ø

# 2ND YEAR BOARD



**AAØAC**  
Dave Davis  
  
218-348-6649  
aaØac@outlook.com

# 1ST YEAR BOARD

**KDØYLN**  
Robert Boyd  
5054 Boulder Dr  
Hermantown, MN 55811

## ARAC Board Meeting Minutes for May 7, 2019

**Present:** Gene Ellefsen-NØVRM, Mike Lovold-NØPDG, Bruce Carlson-KEØNIT, Gary Minter-KD9ABS, Dave Davis-AAØAC, Bob Boyd-KDØYLN, Randy Wabik-KRØB, Doug Nelson-AAØAW, Tom Dorr-KEØRHA, Grant Forsyth-KCØWUP, Bob Schultz-KCØNFB, Robin Davis

**Guest:** Dennis Anderson-WØDIO, Diane Saunders-KØDSL, Del Minter-KEØCLI

Meeting called to order at 6:31 pm by President Gene-NØVRM

**Minutes:** Minutes posted on the web site and in the newsletter. Motion to accept by Gary -KD9ABS, seconded by Bruce-KEØNIT, motion passed

### Treasurer's Report:

Checking .....	2,937.40
Savings .....	1,869.17
Cash Subtotal.....	\$4,806.57
Outstanding Check (Repeater # 1400) ..	<b>-\$1,100.00</b>
Outstanding Check (Fairground Rent).....	<b>-\$600.00</b>
Winter CD .....	1,707.19
CD Subtotal.....	\$1,707.19
Grand Total .....	\$4,813.76

No income for the month of April due to the snowstorm. Donuts, prizes and the Ham Fest rental were the expenses for this month. Motion to accept by Bob-KCØNFB, seconded by Gary-KD9ABS, motion passed

Discussion in April about the ID Protection feature. It is \$3.00 a month so it is \$36.00 a year. Fully managed ID Service, up to \$10,000.00 credit fraud. How high do you think the risk is? Is it worth the \$36.00 a year? We write very few checks each year. Grant-KCØWUP shared a personal experience. Believe it is cheap insurance for the online banking. Motion to purchase the insurance by Gary-KD9ABS, seconded by Bob-KDØLYN, to obtain the insurance. We don't use the debit card for online purchases but we do use it locally. The encryption on the debit cards are usually intense, extensive protection. Suggestion to bring it to the membership for the vote. Gary-KD9LK amended the motion to bring it forward to the Club for a vote

### WDSE Donation:

Now is the time of year we usually make our annual donation to WDSE for allowing out Repeater to be housed in their building. Mike-NØPDG makes a motion to send a check to WDSE for \$1,200.00, seconded by Dave-AAØAC, motion to be brought forward to the Club meeting for a vote

### Building Rental:

In June, we will make our semi-annual donation to the church (First United Methodist Church Duluth / The Coppertop) for our monthly usage. We appreciate the use of the church and the services they provide to our Club

*Continued on Page 3*

## ***ARAC BOARD Meeting Minutes, Continued from Page 2***

### Education:

Nothing until the fall. The class ended just before the Ham Fest and at least three (3) students passed the test

### Testing:

Latest test session numbers had twenty-three (23) candidates that tested. A big thank you to the VEs (16 volunteers). Twenty-two (22) passed the test, with

fifteen (15) new Technicians, two (2) new Generals, four (4) upgrades to General, three (3) new Extras. Kudos to the team that handled the test session as it was a very busy testing session. There will be a testing session scheduled for June prior to the expiration of the General book on July 1, 2019

### Web Site:

Nothing to report. Happy to take any suggestions

### Newsletter:

Newsletter calendar - the highlighting is too dark, which makes it hard to read the information. Suggestion to talk to the editors, Kim Waller-KE0NQS and Steve Waller-KE0NQT, about changing the color or lowering the intensity

### Repeater:

Waiting to hear back from Randy Haglin-N0BZZ. Suggestion from Dave-AB9KC who had a table at the Ham Fest. He is available to do the work including climbing the tower. Gordy Hansen apparently was talking to Randy-KR0B about the fact that he liked it being down (the Mahtowa Repeater) as it doesn't interfere with the 94 Repeater. Randy-KR0B will talk to Randy Haglin-N0BZZ about getting the repeater radio to have it installed in Mahtowa. Diane will talk to 52.525 simplex.

Request from the MS Bike-a-thon to use the 94 Repeater on June 8, 2019, as they have in past years. Motion made by Bruce-KE0NIT, seconded by Dave-AA0AC, to allow the Repeater be used by the MS Bike-a-thon. This will be brought forward to the Club for a final decision

### Ham Fest:

Preliminary information:

348 tickets were sold

65-1/2 tables reserved

Subtract \$500.00 door prize and the \$600.00 fair rental - \$3,744.51 rough profit. Money deposited \$5,544.51

We were maxed out with the tables at 66. Kitchen was good with a small amount of leftovers. Thank you to Rowena Olson, Pat and Del Minter-KE0CLI for assisting. First time, we had two (2) people with outside displays. Al Nordic-WB0PDQ with tower sections was there. Something to keep in mind for future Ham Fests and how we want to handle an outside displays. Grand Prize tickets (yellow), roll of two (2) part hourly tickets and the badge refills were part of the expenses for Bob-KC0NFB, which totaled \$58.42

When calling the red tickets a lot of prizes sat on the table and had to be recalled because no one picked them up. We also need a plan for the folks in the testing session to be able to win prizes as well. Suggestion to get less prizes to diminish the amount of drawing and calling that has to be done during the Fest John Kruk-N9UPC / Yaesu donated a 7250 dual band mobile radio from for a prize

The "Hat Lady" (Mary Lindberg-KB9LFF) was well received and the hats were only \$15.00 with an embroidered name or call sign

We paid for the building with the table rentals

The \$250.00 gift card from Thrivent paid for the food for the Ham Fest. Dennis from the Iron Range Radio Club won the \$500.00 door prize again this year. ARRL did send an e-mail with the gift certificates attached.

*Continued on Page 4*

## **ARAC BOARD Meeting Minutes, Continued from Page 3**

Ticket Sales - looking for suggestions to fast track the people who are testing. People, who are there just to test, were standing in line when they could have skipped that line and went directly to the Test Session. Suggestion for next year to possibly put up a poster or flyer directing the testers to the 4-H building. Thank you from the President Gene-NOVRM for a successful Ham Fest and for all the volunteers who made it happen again this year.

### **New Business:**

#### **Aerial Lift Bridge 90<sup>th</sup> Anniversary:**

ARRL sponsored special event station on August 17, 2019, to commemorate the 90th Anniversary of the Aerial Lift Bridge. Special permit to put up a portable tower, on the property of the US Army Corps of Engineers Maritime Museum, near the Aerial Lift Bridge, for on-site broadcasting. The set up starts at 7:00 am and take down at 6:00 pm. N01B will be used as a special dedicated call sign for the event. Motion to permit Diane Saunders-K0DSL to use the ARAC logo on the poster by Bruce-KE0NIT, seconded by Diane-N0DSL, motion passed. Special QSL cards along with an emailed certificate will be part of this event

#### **ARAC 90<sup>th</sup> Anniversary:**

December 3rd our ARAC Club will be 90 years old. President is in discussion with Kim and Steve about a special event to commemorate our anniversary. Thinking about a National Radio Event with QSL cards. Looking for a volunteer to coordinate an anniversary event

#### **Field Day:**

We need a Coordinator for Field Day this year, as a majority of the regular volunteers will be working Grandma's Marathon, which are the same day

### **Programs:**

May Program is by DPD Officer Jim Forsyth

June is the Grandma's Marathon presentation

July is open as someone cancelled and rescheduled the program

August, the AMSAT satellite people will be there

#### **Picnic:**

Picnic is August 4, 2019. Scott Ahlgren-NOVYU, who is the Picnic Chair, did permit and reservation

#### **Grandma's Marathon:**

Getting a good response from the previous volunteers. There will be a signup sheet circulated at the Club meeting on Thursday. Looking for any new volunteers

#### **Summer CD:**

We should probably buy a summer CD. We have the money from the CD that we cashed out last summer for the Repeater purchase, which was covered by the donations. We should reinvest that money in a CD again. More discussion to follow

Motion to adjourn by Dave-AA0AC, seconded by many, motion passed



# ARAC Club Meeting Minutes

**May 9, 2019**

**Present:**

**President** Gene Ellefsen-N0VRM  
**Vice President** Mike Lovold-N0PDG  
**Treasurer / Membership** Bruce Carlson-KE0NIT  
**Secretary** Robin Davis  
**Third Year Board** Gary Minter-KD9ABS  
**Second Year Board** Dave Davis-AA0AC  
**First Year Board** Bob Boyd-KD0YLN  
**Chaplain (Visiting)** Rolland Bockbrader-KB0CK  
**Parliamentarian** Grant Forsyth-KC0WUP  
**Special Events** – Open / Gene Ellefsen-N0VRM acting  
**Ham Fest / Education** Bob Schultz-KC0NFB  
**Property / Picnic** Scott Ahlgren-N0VYU  
**Repeater** Randy Wabik-KR0B  
**Web Site** Thomas Dorr-KE0RHA  
**Testing** Doug Nelson-AA0AW

**Absent:**

**Newsletter / Historian** Kim Waller-KE0NQS  
**Newsletter** Steve Waller-KE0NQT  
**Repeater** Derek McCorison-W0DNF  
**Repeater** Randy Haglin-N0BZZ

Meeting called to order by President Gene-N0VRM at 7:02 pm

**New Ham Radio Operators:**

Sue Scholz -TBD

**Upgraded Ham Radio Operators:**

Terrance Thompson-KA0TST General to Extra

**Minutes:**

Posted on web site and are in the newsletter. Moved to approve by Grant-KC0WUP, seconded by Mike-N0PDG, motion passed

*Continued on Page 6*

**ARAC Club Meeting Minutes, Continued from Page 5**

**Treasurer's Report:**

Two (2) reports because we did not meet in April due to the snowstorm.

**For March:**

Checking..... 3,210.74  
Savings..... 1,869.17  
Cash Subtotal ..... \$5,079.91

Outstanding Check (Repeater # 1400)-\$1,100.00

Winter CD ..... 1,707.19  
CD Subtotal ..... \$1,707.19

Grand Total..... \$5,687.10

Move to approve by Doug-AA0AW, seconded by Jeff Maker-AD0TH, motion passed

**For April:**

Checking..... 2,937.40  
Savings..... 1,869.17  
Cash Subtotal ..... \$4,806.57

Outstanding Check (Repeater # 1400)-\$1,100.00  
Outstanding Check (Fairground Rent) -\$600.00

Winter CD ..... 1,707.19  
CD Subtotal ..... \$1,707.19

Grand Total..... \$4,813.76

Move to accept as presented by Mike-N0PDG, seconded by Dave-AA0AC, motion passed

**Committee Reports:**

**Ham Fest:**

Thank you to those Del Minter-KE0CLI, John Cavanaugh-KC0AFE, Larry Anderson-N0XPB, Mike-N0PDG, Theresa-KA0CDO, Robin Davis, Rowena Olson and Patrick Hayden-KC0JRJ. Most favorable comments about Pat-KC0JRJ than all the other comments about the Ham Fest. Not only did he work in the Café but he also cleaned the bathrooms upon arrival, maintained them throughout the Fest and handled the garbage. Ed Murray-W0ELM helped to count the monies after the Fest and he is part of the reason we were right on with the finances

Printed off sheets from 2009 and we are with a \$100.00 of those numbers

Bruce-KE0NIT got the IRS paperwork back so we are still a legal Ham Radio Club

*Continued on Page 7*

## **ARAC Club Meeting Minutes, Continued from Page 6**

### Ham Fest Report:

302 Entrance (Grand Prize) Tickets  
Minus \$500.00 for Grand Prize  
Twelve (12) new or renewed memberships  
Kitchen Sales \$650.00 net  
112 Hourly Tickets Sold  
Sixty-Five and a half (65-1/2) Tables Sold  
The Book Vendor pays in books  
ARRL & DXCC get free tables.  
Brainerd Ham Fest gave ARAC a free table at their Ham Fest so we gave them a free table to advertise their Club and Fest.

Cash Deposited .....\$5,544.51

Net Deposit .....\$3,729.41

Current total assets .....\$9,451.54

Motion to accept as presented by Dave-AA0AC, seconded by Gary-KD9ABS, motion passed

A very successful Ham Fest. Honest people on the floor. Any questions about Ham Fest? We had an international flavor, Thunder Bay, Iowa, North Dakota, Wisconsin. Nice to hear the parking lot was full of folks attending

### Testing:

Twenty-three (23) candidates, twenty-two (22) that succeeded in passing the exam. Fifteen (15) Techs, six (6) General, two (2) from nothing to General, three (3) Extra. Thank you to the VEs (Volunteer Examiners), sixteen (16) VEs that were very busy during the Test Session. That Test Session didn't end until 12:45 pm

There will be another test session before the General Exam questions expire on July 1, 2019

### Education:

Obviously, the class went well. Another class in the fall 2019

### Web Site:

If you have any suggestions, please reach out. New web site is very nice and easy to navigate

### Benevolence:

Thank you from Allen Anway-KC9LJN following the loss of his wife, Dorothy Anway-KC9LSG

\$250.00 grant to Ham Fest from Thrivent as well as several free t-shirts. Thank to Rollie-KB0CK for getting the card

### New Business:

#### MS Bike-a-thon:

Request from the MS Bike-a-thon to use the Mahtowa repeater for their communications on June 8, 2019, for the Bike-a-thon. Question from the floor of using the 94 Repeater as well? No, it is not used. Motion by Mike-N0PDG, seconded by Grant-KC0WUP, motion passed to allow them to use the Repeater

*Continued on Page 8*

## ***ARAC Club Meeting Minutes, Continued from Page 7***

### WDSE Annual Donation:

Antenna on their building as well as the Repeater inside their building. We were invited by WDSE last year to move our Repeater in a different space that would allow it to be on the standby generator. They were extremely helpful during the whole process. Our antenna is at 550 feet on the WDSE tower and our transmitter is in their building. They donate the space to us. In the past, we have made an annual donation of \$1,200.00. Motion by Doug-AA0AW, seconded by many, motion passed to donate \$1,200.00 to WDSE

### Checking ID Protection:

The Credit Union has a new service, a Credit and Identification Protection package with a monthly fee of \$3.00/\$36.00 per year. The insurance would allow recovery of any funds. The Board made a motion to bring it to the membership for discussion. What kind of accounting control do we have right now? Under \$50.00, no controls. Over \$50.00 three (3) officers sign, we use a voucher trail, receipt. It might be nice to have the protection. Grant-KC0WUP shared his horror story made it quicker and easier because of the protection insurance. The insurance covers our debit card purchases, like Microsoft software, Sam's Club, Super One. Bob-KC0NFB made a motion, seconded by Dennis Anderson-W0DIO, motion passed

### Grandma's Marathon:

June 22, 2019, there is a sign-up sheet being passed around for those interested in working at the race. Need name, email, and contact information. New volunteers are always placed with experienced workers. Race Executive Director and the Race Director will be at our June 13, 2019, meeting to discuss Grandma's Marathon and the help we provide at the Marathon

### Field Day:

June 22-23, 2019. We are looking for a coordinator or someone to spearhead this. It is the same weekend as Grandma's Marathon

### Special Event:

August 17, 2019. Aerial Lift Bridge will be 90 years old. There will be a station set up on the Army Corp of Engineers next to the bridge.

Silent Key Wally Anderson-AB0CK, Bob-KC0NFB has some items from his estate displayed on a table in back. Please come and look over the items. They are being offered for a donation

Dave-AA0AC, asked at the Ham Fest for a hat for the Yaesu radio sales table, John Kruk-N9UPC. He gave Dave-AA0AC a full sleeve of hats to give away at the Club meeting. If you want a hat, please see Dave-AA0AC tonight. John-N9UPC / Yaesu also donated a 7250 dual band mobile radio to the Ham Fest

ARRL members, please notify Bruce-KE0NIT for the membership rooster. We have 170 individual call signs. Bruce-KE0NIT will be tracking this for our affiliation with ARRL

\$5.00 door prize won by Warren Blodgett-KD0XI

Motion to adjourn by Grant-KC0WUP, seconded by Jeff Nast-KC0MKS, motion passed



# Silent Key



## Dana Carlton Drickhamer - KCØRQE

Dana Carlton Drickhamer, 61, of Duluth, Minnesota lost his battle to Leukemia Thursday morning of May 30, 2019 at Essentia Health, while his close family members were by his side.

Dana (Dan) is survived by his wife, Wendy Drickhamer (Hill), his children, Christy (Cody Hendrickson) Israelson (Drickhamer), Ryan (Amanda Mallinson) Drickhamer, Cory (Kaylyen Hamilton) Drickhamer, Calli (dog), Lexi and Kiki (cats), brothers, David, Gregory, Thomas Drickhamer, his grandkids, Dante and Marcus Israelson, Cori Drickhamer, and Isaiah Mallinson.

Dana retired from Mielke Electric as an Electrical Engineer and served in the Minnesota Coast Guard for a short time. He enjoyed spending his time visiting friends at his favorite hangout spot, being around his close family and cooking any dish you could think of.

Visitation took place at the Cremation Society of Minnesota, 4100 Grand Ave., Duluth, MN 55807 Tuesday, June 4, followed by a ceremony. Burial was at Lakeview Palmers in Duluth Township, MN following the ceremony. A reception in remembrance of Dana was held at the Rustic Bar at 401 Central Ave, Duluth, MN

## Join us for the **NORTHLAND WEATHER NET!**

The **Northland Weather Group Net** changed its repeater and time from Sundays at 7:30 PM on the LSAC repeater system to Mondays at 8:00 PM on the **ARAC repeater system** (146.940 MHz with a tone of 103.5 and standard offset). There is no noticeable difference for those who are checking in on **EchoLink®** due to movement of the EchoLink® node to ARAC's repeater system.

For those who cannot reach ARAC directly by air, please let KCØMKS Jeff Nast know by emailing him at [kcØmks@gmail.com](mailto:kcØmks@gmail.com) . He will add you to the KCØMKS-R EchoLink® authorization list.

### **About EchoLink®**

*EchoLink® software allows licensed Amateur Radio stations to communicate with one another over the Internet, using streaming-audio technology. The program allows worldwide connections to be made between stations, or from computer to station, greatly enhancing Amateur Radio's communications capabilities. There are more than 200,000 validated users worldwide — in 151 of the world's 193 nations — with about 6,000 online at any given time.*

*Courtesy: EchoLink - Copyright © 2002-2018 EchoLink.org*

# U.S. AIR FORCE MILITARY AUXILIARY RADIO SYSTEM

Minnesota State MARS Director  
Reginald B. Cass / AFS5MN



Gene Ellefsen  
NØVRM

Thank you for your time and interest.

Air Force MARS membership could be for you. We do hope that it is.

If you have the following interests, and capabilities, we are interested in recruiting you to become an Air Force MARS member. Completion of the following on line training is mandatory:

Personally, Identifiable Information (PII) <https://iatraining.disa.mil/eta/piiv2/launchPage.htm>

Cyber Awareness [https://iatraining.disa.mil/eta/disa\\_cac2018/launchPage.htm](https://iatraining.disa.mil/eta/disa_cac2018/launchPage.htm)

If you have completed: Incident Command System (ICS) -100, 200, 700, and 800 training, and have obtained certification for Air Force MARS or are willing to obtain this training, again, Air Force MARS could be for you.

You must be interested in joining a group of individuals that are dedicated to amateur radio, emergency communications, and willingness to learn and used military communications procedures for voice and digital communications.

You must have equipment that will meet the minimum requirements for voice and digital operation. The equipment will be: transmitter, receiver, (transceiver) modified to operate out of amateur radio bands, computer, modem, and antenna's that are designed to operate on military assigned frequencies. (The best antenna's will be a dipole cut to the operational frequency. NVIS antennas work best. You will not need a linear amplifier, however if you have one that will operate on out of amateur radio bands that will be a plus)

You must go through and complete training. You are allowed up to 180 days to do so.

Air Force MARS operation's and procedures are based upon "MARS Operating Instruction", (MOI). The MOI manual uses as its basis for instruction a series of Allied Communications Publications (ACP's), Department of Defense Directives, Department of Defense Instructions, and Department of Defense Manual.

If you already belong to a MARS program and would like to consider Air Force MARS, please contact one of the recruiting team members.

For even more information please open and read the attachment.

Our recruitment team is as follows:

AFA5XK Dave, WB7DRU [wb7dru@gmail.com](mailto:wb7dru@gmail.com)

AFA5ZV Randy, KRØB [afa5zv@gmail.com](mailto:afa5zv@gmail.com)

AFA5JY Reg, KAØRJY [reg\\_cass@msn.com](mailto:reg_cass@msn.com)

# Prez Sez...

Hello everyone,

I would like to put out a big "ThankYou" for all those that helped out at our Hamfest on May 4th. An event like this just doesn't happen, it takes people pitching in to get things done. I think we did a great job from all the comments I heard!!

Grandma's Marathon is coming up quickly so now is the time to get out your equipment and test it. So if you need to purchase things like batteries and other items you will have time to get them before the Marathon. Our program for June is Grandma's Marathon so plan to attend, as this is very informative. Also Doug Nelson AAØAW could use a few more people to help out with communications so if you are interested let him know. Hopefully Summer will arrive before then!!!!

73's Gene Ellefsen NØVRM

**We still need volunteers for Grandma's Marathon communication!**

*Please contact Doug Nelson AAØAW to sign up*



**Field Day  
June 22-23, 2019**

**Start: 1800 UTC Saturday  
End: 2059 UTC Sunday (see rules 3.1, 3.2, 3.3)**

*Always the fourth full weekend in June*

# Contest Calendar 2019

## JUNE

ARRL June VHF Contest	1800 UTC June 8 to 0300 UTC June 10
ARRL Field Day	1800 UTC June 22 to 2100 UTC June 23

## JULY

CQ Worldwide VHF Contest	1800 UTC July 20 to 2100 UTC July 21
North American QSO Party, RTTY	1800 UTC July 20 to 0559 UTC July 21

## AUGUST

ARRL 222 MHz and Up Distance Contest	1800 UTC Aug 3 to 1800 UTC Aug 4
North American QSO Party, CW	1800 UTC Aug 3 to 0600 UTC Aug 4
Maryland-DC QSO Party	1600 UTC Aug 10 to 2400 UTC Aug 11
Rookie Roundup RTTY	1800 UTC to 2359 UTC Aug 18
Hawaii QSO Party	0400 UTC Aug 24 to 0400 UTC Aug 26
Ohio QSO Party	1600 UTC Aug 24 to 0400 UTC Aug 25

## SEPTEMBER

Tennessee QSO Party	1800 UTC Sept 1 to 0300 UTC Sept 2
New Hampshire QSO Party	1600 UTC Sept 21 to 2200 UTC Sept 22
Maine QSO Party	1200 UTC Sept 28 to 1200 UTC Sept 29
Texas QSO Party	1400 UTC Sept 28 to 2000 UTC Sept 29



# CW Abbreviations

AR End of Message	AS Pse QRX	BK Back to You	SK End of Contact
TU Thank You	PSE Please	K Invite to Transmit	
QST Calling all Amateurs	QRL Are You Busy?	QRU Have anything for me	
QRV Are You Ready?	QRX Standby	QRS Transit Slower	

A	●	M	—	Y	—
B	—	N	—	Z	—
C	—	O	—	1	—
D	—	P	—	2	—
E	●	Q	—	3	—
F	—	R	—	4	—
G	—	S	—	5	—
H	—	T	—	6	—
I	●	U	—	7	—
J	—	V	—	8	—
K	—	W	—	9	—
L	—	X	—	0	—



## US Amateur Radio Bands

### US AMATEUR POWER LIMITS

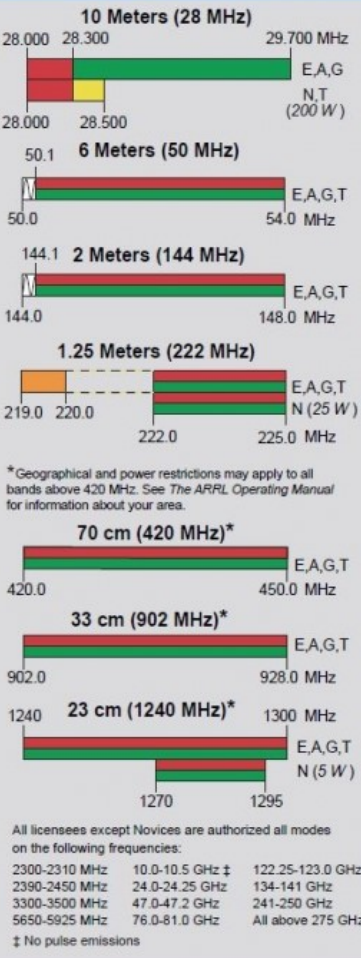
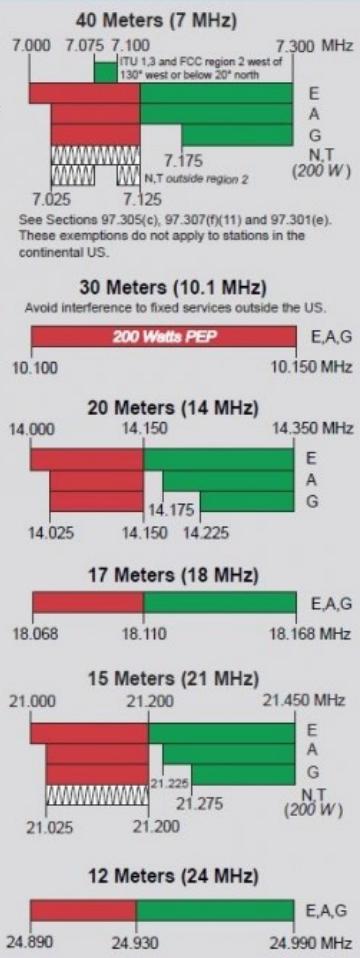
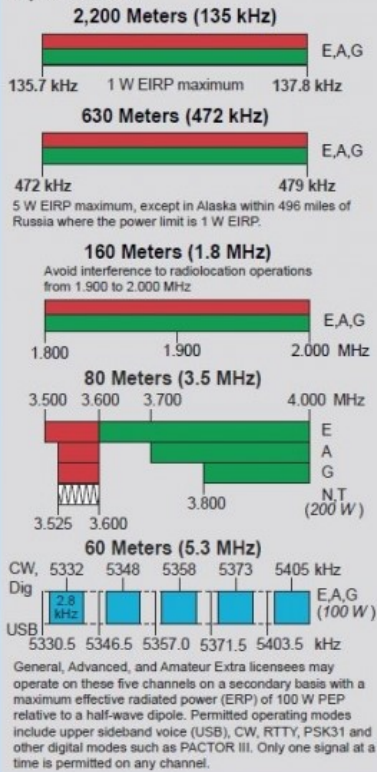
FCC 97.313 An amateur station must use the minimum transmitter power necessary to carry out the desired communications. (b) No station may transmit with a transmitter power exceeding 1.5 kW PEP.

Effective Date for  
2,200 and 630 Meters  
to be announced



The national association for  
**ARRL AMATEUR RADIO**

On March 28, 2017, the Federal Communications Commission adopted rules that will allow Amateur Radio access to 472-479 kHz (630 meters) and to 135.7-137.8 kHz (2,200 meters). However, amateurs cannot use these frequencies until 30 days after the Report and Order is published in the Federal Register and the final procedures for registering stations with the Utilities Telecom Council (UTC) have been approved and announced. At the time this chart was created, the Report and Order had not been published and the UTC online registration site is not yet available. Follow ARRL news for further information. New charts will be published at [www.arrl.org/graphical-frequency-allocations](http://www.arrl.org/graphical-frequency-allocations) when the bands are fully available for use.



**KEY**

Note:  
CW operation is permitted throughout all amateur bands.  
MCW is authorized above 50.1 MHz, except for 144.0-144.1 and 219-220 MHz.  
Test transmissions are authorized above 51 MHz, except for 219-220 MHz

- = RTTY and data
- = phone and image
- = CW only
- = SSB phone
- = USB phone, CW, RTTY, and data
- = Fixed digital message forwarding systems only

E = Amateur Extra  
A = Advanced  
G = General  
T = Technician  
N = Novice

See ARRLWeb at [www.arrl.org](http://www.arrl.org) for detailed band plans.

**ARRL We're At Your Service**

ARRL Headquarters:  
860-594-0200 (Fax 860-594-0259)  
email: [hq@arrl.org](mailto:hq@arrl.org)

Publication Orders:  
[www.arrl.org/shop](http://www.arrl.org/shop)  
Toll-Free 1-888-277-5289 (860-594-0355)  
email: [orders@arrl.org](mailto:orders@arrl.org)

Membership/Circulation Desk:  
[www.arrl.org/membership](http://www.arrl.org/membership)  
Toll-Free 1-888-277-5289 (860-594-0338)  
email: [membership@arrl.org](mailto:membership@arrl.org)

Getting Started in Amateur Radio:  
Toll-Free 1-800-326-3942 (860-594-0355)  
email: [nowham@arrl.org](mailto:nowham@arrl.org)

Exams: 860-594-0300 email: [vec@arrl.org](mailto:vec@arrl.org)



# Nets... Nets... Nets... Nets... Nets... Nets... Nets... Nets...

Have a favorite HF/6m/2m/1.25m/70cm net that you check into or listen in on? Also, please send corrections and we will add it to the list below - Kim KEØNQS at my email KEØNQSmn@gmail.com.

- **Northland Weather Group Net:** Mondays 2000 on the ARAC repeater (146.940 MHz with a tone of 103.5 and standard offset).
- **Minnesota D-Star Net:** Sundays at 19:30 on Reflector 53A
- **Minnesota Section Net** 1200 and 1730 on 3.860 [Net Manager: NØYR] [http://www.mn-section.org/dept\\_stm.html](http://www.mn-section.org/dept_stm.html)
- The non-non-net: Evenings 2000 144.200 USB except for Sunday evenings.
- Badger WX Net: 0500-0715 on 3.985. Give 24 hour high/low/current temperature, precipitation and snowfall.
- **PICONET:** 3.925 from 0900-1100 CT Mon-Sat and 1600-1700 CT Mon-Fri. Info at: <http://www.piconet3925.com>
- Michigan Upper Peninsula Net: 1600 (CST) on 3.921 MHz Sun-Sat and 1200 Sun. Info: <http://www.michupnet.com>
- Great Lakes Marine/Maritime Mobile Net: Morning 07:30 - 3.932; 08:15 - 7.261 MHz and evening 18:30 - 3.1730927; 19:15 - 7.268 MHz. Weekend extra net: 10:00 - 7.261/7.268 MHz. All CST, LSB and +/- QRM. See: <http://www.sailblogs.com/member/glmmnet/>
- MIDCARS: 07:30-13:00 - 7.258 MHz. See: <http://www.midcars.net>
- Iowa snowbird net on 14.257MHz, M-W-F at 10:00 am Local Time. This is an open net.
- Spider Web Net (Marco Island FL) on 14.347 every morning at 0730 CST/CDT: <http://www.spiderwebnet.net>
- Maritime Mobile Service Network: Daily at 1100—2100 Central on 14.300. <http://mmsn.org> and <http://www.14300.net>
- RV Radio Network: Every day at 1900 Central on 7.265 MHz. Web site: <http://www.rvradionetwork.com>
- Upper Midwest Ten Meter Net: Every Thursday Evening @ 8 PM – 28.480 MHz USB
- Wisconsin Sideband Net: Daily @ 5:15 PM – 3985 [or 3982.5] KHz LSB
- Upper Midwest Ten Meter Net: Every Thursday Evening @ 8 PM – 28.480 MHz USB
- Hobby Helpers Net - Tuesday @ 8 PM – 28.330 MHz USB (Isanti MN) LSB [Net Manager: WOØA].
- Northstar Trader Net: 3.908 +/- at 0830 CST Sundays
- WARFA: 3.908 +/- Sun/Tue/Thu nights at 2200 CST, <http://warfa.org/>
- Youth Net: 14.320-14330 Sundays 1800-1900 UTC, Net Control: AC8PI
- YACHT: Saturdays 1900 CST on EchoLink #481872, <http://yachthams.webstarts.com>
- Northwestern Ontario ARES Net: Evenings at 20:15 (Central) on +/- 3.750Mhz
- The Iron Range Net: Saturdays at 0800 Central time on or near 3.919 Mhz. Look them up on Facebook!
- FORX Net: Mondays at 1900 Central at 3.941 Mhz +/- QRM. WAØJXT — Grand Forks, North Dakota
- HF CW: Fridays 08:00 CST, 7.112 MHz. Informal slow speed CW Net. W8IRT NCS. Email: w8irt@aol.com
- Minnesota ARES Digital Net: Thursdays at 2000 CST, 3.5835 MHz USB +/- QRM, Mode: Olivia 8/500.
- SARA Digital Net: Sundays at 1900 Local, 3.582.150 MHz USB +/- QRM, Mode: BPSK31/BPSK63
- Spider Web Net (Marco Island FL): 14.347 every morning at 0730 CST/CDT: <http://www.spiderwebnet.net>
- Broadcaster Net: 7.231 or 3.855 M/W/F @ 1500 UTC. 14.255 M-F @ 2130 UTC. <http://www.cbsretirees.com/ham.htm>
- Old Military Radio Net: 7.268 +/- nightly at 0200z. Other times/Frequencies too. See: <http://www.mrca.ar88.net/>
- Rag Chew Crew/Tailgaters/Freewheelers Nets: 3.916 +/- nightly at 1900 CST, <http://www.tailgatersnet.com>
- North South Net: 7.214.6 +/- at 0700 CST, Monday-Saturday

**Wanted!**

Looking to buy a non-working Icom 706 for parts. Email me: [anordin@aol.com](mailto:anordin@aol.com)

Please email your for sales or wanted items to Kim, KEØNQS, at [KEØNQS.mn@gmail.com](mailto:KEØNQS.mn@gmail.com).

**KCØNFB, Bob**, would like to remind all hams to **make sure your license is current** and up-to-date on your address. You can visit the FCC ULS to check it and make changes at [www.fcc.gov/uls](http://www.fcc.gov/uls).

**Contest Calendar** at [www.contestcalendar.com](http://www.contestcalendar.com)

**National Contest Journal** at [www.ncjweb.com](http://www.ncjweb.com)

**QSO Party Note:** State/Province/National QSO Parties are abbreviated with the 2 or 3 letter abbreviation for the state/province/national designation followed by QP for QSO Party:

Examples: Minnesota QSO Party is MNQP  
British Columbia QSO Party = BCQP

**QRZ** web site at [www.qrz.com](http://www.qrz.com)  
**VHF Propagation** site at [www.aprs.mountainlake.k12.mn.us](http://www.aprs.mountainlake.k12.mn.us)

**Reminder:** The **Contest Corral** monthly listing of contests can be found in each issue of **QST**. **ARRL** sponsored contests can be found in Contest Corral, highlighted, or on the ARRL's web site at [arrl.org](http://arrl.org).

**Club Repeater**

**WØGKP**

**146.94 (-)**

**CTCSS Tone**

**103.5**

**Next ARAC Board Meeting**

**Tuesday, June 4, 2019  
@ 1830  
Sammy's West Duluth**

**Next ARAC Club Meeting**

**7 p.m. Thursday  
June 13, 2019  
Copper Top Church**

**2019 HOLIDAYS**

<b>June 16</b>	<b>Fathers Day</b>
<b>July 4</b>	<b>Independence Day</b>
<b>September 2</b>	<b>Labor Day</b>
<b>November 11</b>	<b>Veteran's Day</b>
<b>November 28</b>	<b>Thanksgiving</b>
<b>December 25</b>	<b>Christmas Day</b>

**Upcoming 2019 Local Events**

Confirmed Dates for 2019 (Correct as of publication)

- **June 22** **Grandma's Marathon**
- **June 22-23** **ARRL Field Day**

**Upcoming 2019 Meeting Programs**

TBD

Interested in providing a program, or have an idea for one? Contact Mike NØPDGP at [lovoldm@gmail.com](mailto:lovoldm@gmail.com)

# Duluth Area Repeaters



## ARAC System WØGKP

Freq.	Offset	Tone	Location
146.940	minus	103.5	Duluth
146.940	minus	107.2	Lakeside (rcv)
146.940	minus	151.4	Two Harbors (rcv)
146.940	minus	100.0	Gary-New Duluth (rcv)
146.940	minus	123.0	Solway (rcv)
146.940	minus	110.9	Cloquet (rcv)
147.000	minus	103.5	Mahtowa
444.100	plus	103.5	Duluth UHF Link

## N9MMU/N9QWH System (WI)

145.310	minus	110.9	Duluth
145.490	minus	110.9	Solon Springs
147.255	plus	110.9	Hayward
145.110	minus	110.9	Rice Lake
147.345	minus	136.5	Holcombe
145.230	minus	110.9	Eau Claire

## WECOMM – WI Statewide Linked System WE9COM

147.075 plus 110.9 Meteor Hill (closest repeater to Duluth)

## LSAC System #1

147.330	plus	151.4	Proctor
147.330	plus	103.5	Duluth (rcv for Proctor)
147.330	plus	156.7	Duluth (North) (Fish Lake)
147.270	plus	114.8	Two Harbors
147.270	plus	103.5	Wales
147.090	plus	114.8	Silver Bay
145.410	minus	114.8	Finland
147.300	plus	114.8	Isabella
145.150	minus	103.5	Washburn, WI
146.700	minus	103.5	Bayfield, WI
443.850	+5.00	none	Bayfield, WI
147.165	plus	110.9	Hurley, WI
146.640	minus	151.4	Ely
443.500	+5.00	141.3	Gilbert
147.060	plus	103.5	Virginia
147.360	plus	162.2	Cook
147.165	plus	114.8	Coleraine
443.925	+5.00	110.9	Brainerd

## NARC System NAØRC

145.45Ø	minus	1Ø3.5	Solway Twp
145.45Ø	minus	114.8	Park Point (rcv)
147.135	plus	114.8	Park Point (rcv)
147.135	plus	1Ø3.5	Knife River

## Stand Alone Repeaters

145.21Ø	minus	11Ø.9	Clam Lake, WI
146.88Ø	minus	123.Ø	Grand Rapids
146.91Ø	minus	146.2	Duxbury, MN

## Fusion and D Star

Fusion (Analog has tone and C4FM digital with no tone)

147.15Ø	plus	151.4	NTØB Gilbert Fusion Rptr
145.17Ø	minus	11Ø.9	WA9KLM Superior – Douglas County RACES/ARES Fusion Repeater

443.1ØØ +5.ØØ 1Ø3.5 KBØYHX Cloquet – Carlton County RACES/ARES Fusion Repeater

444.3ØØ +5.ØØ 1Ø3.5 NØEO Spirit Valley Amateurs Fusion Repeater WIRES-X NØEO

147.375 plus NØEO D Star  
442.2ØØ plus NØEO D Star

[Repeater list compiled by Dr. Frequency—KCØWDQ]

## ST. Louis County Department of Emergency Services Net Control Roster

<b>N9DMG</b>	Scott Swanson	<b>NØVRM</b>	Gene Ellefsen
<b>AAØAW</b>	Doug Nelson	<b>KCØWDQ</b>	Paul Dallavia
<b>WØNWO</b>	Dave Miller	<b>WØDIO</b>	Dennis Anderson
<b>KØDSL</b>	Diane Saunders	<b>AAØME</b>	Randy Johnson

*Sunday Nights at 21ØØ on the ARAC System  
(See Calendar for net control schedule)*

## Ten Meter SSB Net Control Roster

<b>AAØAW</b>	Doug Nelson	<b>WØLWU</b>	Joe Meese
<b>NUØW</b>	Gary Hanson	<b>K9KDK</b>	Al Babcock
<b>WØDIO</b>	Dennis Anderson	<b>NØVRM</b>	Gene Ellefsen
<b>AAØME</b>	Randy Johnson	<b>KØDSL</b>	Diane Saunders

*Sunday Nights at 2ØØØ on 28.45Ø MHz USB*

## Ten Meter CW Net Control Roster

<b>AAØAW</b>	Doug Nelson	<b>NØPDG</b>	Mike Lovold
--------------	-------------	--------------	-------------

*Sunday Nights at 193Ø on 28.125 MHz*

## Northland Weather Group Net Control Roster

**KCØMKS** Jeff Nast

*Monday Nights at 2ØØØ on the ARAC System*

## Douglas County Net

*Tuesday Nights at 2ØØØ on 145.49Ø (N9QWH System)*

## Central Carlton County Net

*Tuesday Nights at 2Ø3Ø on the ARAC System*

## Lake County RACES/ARES Net

*2nd & 4th Wednesday Nights at 19ØØ on the LSAC 1 System*



# Elmers



**El-mer / el-mər/ [el-mer]**

1. a male given name: from Old English words meaning "noble" and "famous."
2. an adhesive used to bond like or unlike materials
3. An experienced ham radio operator who mentors new and prospective hams.

<u>Name</u>	<u>Call</u>	<u>Expertise</u>
Jeff Nast	KCØMKS	APRS, EchoLink, WinLink, Fusion, Contesting
Bob Schulz	KCØNFB	Contesting
Jim Anderson	NØJWA	QsoNet
Doug Nelson	AAØAW	HF, VHF/UHF, Contesting, Packet, APRS, Morse Code, VE testing, Echolink, Allstar, EmCom...

# Membership E-mail Directory

Ahlgren, Scott NØVYU  
sahlgren01@msn.com

Anderson, Jim NØJWA  
kcØmko@centurylink.net

Anway, Allen KC9LJN  
allen@a2d2.com

Anway, Dorothy KC9LSG  
dorothy@a2d2.com

Bakke, Richard KDØQHE  
rabakke46@aol.com

Barnes, Ray KEØZN  
KEØZN@outdrs.net

Blodgett, Warren KDØXI  
kdØxi@aol.com

Blotti, Nick KBØMHD  
NickBlotti@hotmail.com

Bockbrader, Jonah KEØCXD  
j@pelirrojo.ninja

Bockbrader, Rollie KBØCK  
Rollie.bockbrader@q.com

Clemens, Butch KBØSMG  
kbØsmg@2z.net

Currier, Barb  
bjcurrier@peoplepc.com

Dall, Jim WDØGVW  
Dall, Teresa KAØCDO  
wdØgvw@gmail.com

Dallavia, Paul KCØWDQ  
kcØwdq@yahoo.com

Daly, Ed KØYMF  
eddalymn@aol.com

Ellefsen, Gene NØVRM  
Ispitech@mail.com

Ferch, Tim AKØTF  
akØtf@aol.com

Fisher, Bud NØGGF  
nØggf@arrl.net

Ferguson, Tom WBØDHB  
tferg5@msn.com

Fleischman, Bill KCØZZL  
wfleisch@d.umn.edu

Forsyth, Grant KCØWUP  
forsythgrantc@gmail.com

Frederick, Jerry NØBNG  
nØbng@mchsi.com

Frederick, Julie NØPIE  
jfreds@mchsi.com

Fuller, Donn ADØN  
donnfuller@midco.net

Freeman, Roger NØGRX  
rf2134@aol.com

Gibbs, Rex NØKXT  
nØkxt@yahoo.com

Godbout, Med WØEEZ  
wØeezmedgodbout@centurytel.net

Hanson, Gary NUØW  
captaingary@chartermi.net

Harstad, Ben KEØJDB  
coast\_guard\_aux\_duluth@yahoo.com

Hawkinson, Garry WØELH  
garryhawkinson@yahoo.com

Jakubek, Patrick KDØSGK  
kdØsgk@gmail.com

Johnson, Randy AAØME  
randy@nsw4x4.com

Leslie, Shirl KBØSBM  
dsleslie@centurytel.net

Makowski, Cletus KBØLBS  
kbØlbs52@msn.com

Makowski, Karen NØWEZ  
k-wez1@hotmail.com

Marchetti, Jim KEØLHX  
jimmarchetti@live.com

Mattson, Bing KCØKRA  
, Kathy KCØTIV  
HamToHam@msn.com

McCorison, Derek WØDNF  
derek1Ø68@hotmail.com

Meese, Joe WØLWU  
rxcpd@yahoo.com

Miller, Dave WØNWO  
dmiller@nwoutlet.com

Mullozzi, Anthony (Nick)  
AJ KDØYQA  
Ben KDØYPZ  
Joe KDØYQB  
KDØYQC  
amulloz@hotmail.com

Murray, Edwin W1ELM  
w1elm@arrl.net

Nast, Jeffrey KCØMKS  
kcØmks@gmail.com

Nelson, Doug AAØAW  
aaØaw@chartermi.net

Nelson, Glenn KAØGGG  
mgnelson1@aol.com

Nelson, John KBØSUW  
jon275@q.com

Nordin, Al WBØDBQ  
anordin@aol.com

Olson, Lloyd Sr. KCØSJB  
rdrunner5Ø7@aol.com

Olson, Lloyd Jr. KC9JTC  
kc9jtc@yahoo.com

Pearson, Wayne WØKRH  
meppsy@netzero.net

Pettit, Kathy KCØYVM  
kcØyvm@gmail.com

Pomroy, Deb KCØUKC  
dpomroy@d.umn.edu

Pyrlik, David KEØHHQ  
David.pyrlik@gmail.com

Reger, Bernard KB9KQZ  
Mike KB9KRA  
Brian KB9KUX  
Chris KB9WJQ  
bjr5488@yahoo.com

Contact Kim or Steve Waller to include your name in this listing!

Contact Kim or Steve Waller to include your name in this list-

Rosell, Dawson KEØHEL  
rosel032@d.umn.edu

Rude, Mark AKØZ  
rudemark@q.com

Saunders, Diane KØDSL  
keØaqu@charter.net

Scholz, Greg KDØUYN  
kdØuyn@gmail.com

Schulz, Robert KCØNFB  
kcØnfb@charter.net

Snyder, Mark ACØLE  
snyds1118@msn.com

Stark, John KCØYVH  
johnvinyl@yahoo.com

Stroud, Butch KCØPDK  
kenwren@netzero.net

Swanson, Scott N9DMG  
sswanson6749@charter.net

Waller, Kim KEØNQS  
keØnqs.mn@gmail.com

Waller, Steve KEØNQT  
keØnqt@gmail.com

Whelan, Jacqui KBØJIM  
cndymx@gmail.com

Whelan, John KØJRW  
jr-whelan@hotmail.com

Winterscheidt, Heinz KD6FSA  
alter.skipper@gmail.com

Wulf Gar WU1FGR  
wu1fgr.ham@gmail.com

Members, please check your name and email address for accuracy. If you are not on this list and want to be on the list, contact me with your info. If you need to make a change, please let us know at KEØNQSmn@gmail.com Or KEØNQT@gmail.com

Co-Editors,  
Kim & Steve Waller  
KEØNQS & KEØNQT





**SUNDAY NIGHT NETS**  
 1930 - CW - 28.125 MHz USB-CW  
 2000 - USB 28.450 MHz  
 2100 - Southern St. Louis County  
 Emergency Services Net  
**MONDAY NIGHT NETS**  
 2000 - Northland WX Net LSAC & ARAC

# JUNE

## CLUB EVENTS

**TUESDAY NIGHT NETS**  
 2000 - Douglas Cty 145.490 MHz  
 2030 - Central Carlton County  
**WEDNESDAY NIGHT NETS**  
 1900 - Lake County - LSAC1  
 2nd & 4th Wednesdays  
 2100 - BWAR

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2  CW 1930 AA0AW USB 2000 AA0AW ES 2100 N9DMG	3  WX 2000 KC0MKS	4  ARAC BOARD MEETING 1900 Sammy's West Duluth  DC Net 2000 CC Net 2030	5  Lake County Net 1900	6	7	8
9  CW 1930 N0PDG USB 2000 W0LWU ES 2100 AA0AW	10  WX 2000 KC0MKS	11  DC Net 2000 CC Net 2030	12  Lake County ARES/RACES Meeting 1800  Lake County Net 1900	13  ARAC Club Meeting @ 1900 Coppertop	14	15
16  CW 1930 AA0AW USB 2000 K9KDK ES 2100 KC0WDQ	17  DC ARES/RACES Mtg 1900 DC EOC  WX 2000 KC0MKS	18  DC Net 2000 CC Net 2030	19  St. Louis County ARES/RACES Mtg 1630 Pike Lake EOC  Lake County Net 1900	20	21	22  Grandma's Marathon  Field Day Begins 1800 UTC
23  Field Day Ends 2059 UTC  CW 1930 N0PDG USB 2000 W0DIO ES 2100 W0NWO	24  WX 2000 KC0MKS	25  DC Net 2000 CC Net 2030	26  Lake County Net 1900	27  Carlton County ARES/RACES Meeting 1900 CC EOC	28	29  Club Breakfast @ The Chalet 0730-0800
30  CW 1930 AA0AW USB 2000 N0VRM ES 2100 N0VRM						



Get this newsletter *faster*  
via email!

Email Doug AAØAW at  
[aa0aw@chartermi.net](mailto:aa0aw@chartermi.net)

Next Meeting: Thursday,  
*JUNE 13, 2019 - 7 pm*

## CONGRATULATIONS

To new hams who have joined our community in the last few weeks, as well as those who have newly upgraded — to General or Extra:

Terrance Thompson KAØTST, upgraded from General to Extra Class

New Ham: Sue Schotz - Call Sign TBD

## ARAC Committee Chairs

**Club License Trustee:**

Ray Barnes KEØZN

**Control Operators:**

AAØAW - NØKXT - KCØNFB

**Newsletter:**

Kim KEØNQS & Steve KEØNQT Waller

**Education Chair:**

Bob Schulz KCØNFB

**Hamfest Chair:**

Bob Schulz KCØNFB

**Chaplains:**

**Visiting Chaplains:**

Denny Anderson WØDIO

**Parliamentarian:**

Grant Forsyth KCØWUP

**Website:**

Thomas Dorr KEØRHA

**Membership:**

Bruce Carlson KEØNIT

**Property Chair:**

Wulf Gar WU1FGR

**Testing:**

Doug Nelson AAØAW

**Field Day:**

Dennis Anderson WØDIO

**Picnic Chair:**

Scott Ahlgren, NØVYU

**Repeater Chairs:**

Randy Haglin NØBZZ  
Randy Wabik KAØJZV



### The ARAC RELAY

Published monthly and distributed free to members, "The RELAY" is the official publication of the Arrowhead Radio Amateur Club, Inc. Members are encouraged to submit articles, opinions, and classifieds. Your submission will be placed as soon as possible providing it does not conflict with the bylaws of the Arrowhead Radio Amateur Club, Inc. The editors reserve the right to omit any submission that is not a required item. If a submission is questionable, it will be presented to the Board of Directors at the next scheduled board meeting for authorization.



## Field Day, Continued from Page 1

“opportunity to get out in the open in this fine spring weather, the real object of this contest is to test ‘portables’ wherever they may be available. If successful, we want to make it an annual affair.”

It **was** successful. With little advance notice of his event until amateur radio enthusiasts received the June QST issue in late May of 1933, news of the upcoming contest was relayed excitedly throughout the world and garnered thousands of participants. The September 1933 edition of QST published the First Annual Field Day winner as W4PAW, a non-club group in Florida. The group made 62 QSOs and had a multiplier of 28 sections/countries for a total of 1876 points.

Field Day was firmly established as an annual tradition among radio amateurs. The A.R.R.L. rethinks the contest rules for 1934. The total number of stations contacted becomes the goal, with the multipliers for sections and countries removed. Multi-band contacts are not permitted and DX contacts are encouraged, but have no extra points. “DXing” is making two-way radio contact with distant stations, including foreign countries. The name came from “DX”, the telegraphic shorthand for “distance”.

After an outpouring of excitement for Field Day in June 1936, the A.R.R.L. decides to add a bonus summer Field Day event that year in August. The one in June is the official “Fourth Annual Field Day”, with the August event being called a “Special Field Day”. Field Day continues to grow in popularity and settles into being limited to an annual event each June, although it floated among different June weekends on the calendar for many years until the A.R.R.L. decided the last full weekend in June would be the permanent recurring schedule.

Field Day rules have changed throughout the years of course (see a list of notable changes by year on page 22), a necessary response to fine-tune the rules at the request of A.R.R.L. members for clarity and fair play, as well as obvious changes in technology and band availability.

The stated purpose of Field Day itself has also shifted and been clarified. When A.R.R.L. created the Amateur Radio Emergency Service (ARES) from 1935-1937, an emphasis on Field Day as an emergency-readiness exercise began. This important distinction added a greater weight of official function and credibility with the newly-formed Federal Communications Commission, created in 1934 to replace its predecessor, the Federal Radio Commission.

Field Day was suspended from 1942 – 1945 following FCC Order No. 87 that withdrew all amateur frequencies from private use immediately after the December 7, 1941 Pearl Harbor attack. Though amateur radio operators couldn’t participate in the thriving hobby as they knew it, they seamlessly transitioned to helping our country--and the world--through World War II.

In his superb August 1995 QST article entitled “Amateur Radio and WWII”, Dan Davis WBLUX notes that amateur radio moved “out of thousands of basement, bedroom and attic ham shacks across America into military classrooms. In these classrooms the intrinsic value of Amateur Radio to the war effort would be realized. A licensed amateur operator represented a great asset to any branch of the military services.”

In fact, even before the Pearl Harbor attack that drew the U.S. into the war, the War Department, predecessor of the Department of Defense, began preparing to cultivate the expertise of amateur radio operators in the event they were needed during this time of world conflict. A questionnaire was sent to every amateur operator listed in the Callbook, which was a directory of amateur radio call signs originally published by the Department of Commerce’s Bureau of Navigation-Radio Service division. The questionnaire requested information about an amateur radio operator’s code proficiency, military status,



Staff Sgt Jim Marglin, W9THS, radio instructor at Fort Knox, and Mickey Marglin, W9ZTU, first female radio operator in the Signal Corps, with baby Patricia.

Continued on Page 21

## Field Day, Continued from Page 20

education, occupation and dependents. Many hams enlisted in the military before the WWII draft was instituted, so all branches of our military had a wealth of radio experts that were absolutely instrumental in a successful war effort.

After the war, Field Day resumed and amateur radio operators who formerly served in the military came home to a hero's welcome. Amateur radio clubs embraced Field Day as an event to celebrate hams as war heroes and to revel in the victorious end to a long, difficult conflict. For many clubs, Field Day became a large picnic gathering of family and friends who eagerly watched amateur radio operators show off their skills during the event.

Enthusiasm for Field Day continued to flourish during Cold War times and ARRL changed FD rules to accommodate Single Side Band, packet radio, and the digital technologies of today.

Current amateur radio clubs promote their Field Day participation to members in a number of ways:

- a) an exercise to promote amateur radio to newly-licensed operators, encouraging them to become more acquainted with various types of contacts;
- b) a contest for seasoned hams to acquire as many contacts possible for the club;
- c) an emergency preparedness exercise in which participants employ temporary or alternate-power facilities in order to develop skills for rapid deployment of emergency communications in disaster response;
- d) an event that celebrates amateur radio as a hobby, with club members' family and the surrounding community invited to participate in picnics and other family fun activities while seeing educational demonstrations of amateur radio at various temporary installations.

Here's how the ARRL describes Field Day today:

"Field Day is a picnic, a campout, practice for emergencies, an informal contest and, most of all, FUN! It is a time where many aspects of Amateur Radio come together to highlight our many roles."

ARRL goes on to say, "While some will treat it as a contest, other groups use the opportunity to practice their emergency response capabilities. It is an excellent opportunity to demonstrate Amateur Radio to the organizations that Amateur Radio might serve in an emergency, as well as the general public.

"For many clubs, ARRL Field Day is one of the highlights of their annual calendar. The contest part is simply to contact as many other stations as possible and to learn to operate our radio gear in abnormal situations and less than optimal conditions. We use these same skills when we help with events such as marathons and bike-a-thons; fund-raisers such as walk-a-thons; celebrations such as parades; and exhibits at fairs, malls and museums — these are all large, preplanned, non-emergency activities. But despite the development of very complex, modern communications systems — or maybe because they ARE so complex — ham radio has been called into action again and again to provide communications in crises when it really matters."



Photos (above & below) of ARAC Field Day at Park Point—1947 or 1948



Photos Courtesy Dan (KDØCRZ) and Donna Holm Collection

Continued on Page 22



## Field Day, Continued from Page 21

### Are we doing all we can do make Field Day fun as members of the Arrowhead Radio Amateur Club?

Field Day is what we all make it! There are so many ways we can each add ideas and simple activities to celebrate this yearly club event that has waned in participation:

- ◆ Not interested in contesting? Learn more about it & cheer on your fellow club members in action!
- ◆ Not sure about what else to do? Bring additional food to cook out and make it a bigger picnic! Have a “best dessert” contest—or other food contest—with a few of your fellow hams!
- ◆ Have a tent or a camper? Bring it to Field Day and camp overnight!
- ◆ Have a projector and a movie screen? Bring it to “Field Day After Dark” and show a fun movie you think your fellow hams will enjoy and make s’mores!

These things – and much more--are what other clubs in the U.S. and Canada are doing on Field Day, so why not us? Let’s change the way we think of Field Day and make it another great way for **all of us** to gather and enjoy summer as a club! ★

## FIELD DAY Rule Changes just through the twentieth century alone.

Though not an exhaustive history, it’s great insight on how the hobby has evolved over the years:

- **1939** Rule is added that all station apparatus must fall within a 100 ft radius excluding antennas.
- **1940** The 100’ rule is changed to 500’. Home stations are allowed.
- **1942-1945** All amateur radio activity ceases due to World War II
- **1946** Field Day officially returns and adds a “VHF Only” category
- **1948** 11 meters (now the CB band) is added for a Field Day Band. Battery and Emergency power categories are added. Field Day is shortened to 24 hours
- **1949** Mobile category added to Field Day.
- **1950** The modern day Field Day classes are established. The 500’ circle is increased to **1000’**
- **1951** To encourage home emergency power, a home emergency power class is added (Class D), while home stations using power mains are class E
- **1957** Simultaneous starts return, starts 4 pm EST and ends 4pm PST the next day. Anyone can operate 24 of the 27 operating period.
- **1963** ARRL rules that a Field Day site can only use one call sign.
- **1968** All home stations are moved to Class D.
- **1970** A free Novice station is allowed. Starting time is moved to 1800z.
- **1972** Battery results are listed separately.
- **1973** Repeater rule is waived for satellite contacts and a 50 point sat bonus is included for the first time.
- **1974** A 100-point bonus is added for making contacts solely by natural power. The “15 Minutes” rule for band changes is instituted.
- **1975** The explosion of SSB leads the ARRL to institute a 2X multiplier for CW contacts.
- **1977** The natural power bonus disappears and techs are now allowed to operate the Novice station. The 2X CW rule becomes permanent.
- **1980** RST is replaced with category and class for the exchange. Setup time is changed again; nothing can be set up before the 24 hour period. Natural power comes back as a 100 point bonus. Sat and Field Day message bonuses increase to 100 points.
- **1981** Due to the popularity of packet radio, a 100 point bonus is instituted for one packet QSO and the repeater rules are waived for QSOs through a digipeater.
- **1984** Power multiplier is changed from 200 watts to anything less than 150 watts.
- **1993** Due to the influx of Technicians, a 100 point bonus is added for making 10 VHF/UHF contacts and a free VHF/UHF station is allowed class A and B.
- **1994** The modern Field Day record is set by K6CAB 15A by getting 3450 QRP QSO’s for a total score of 30,150
- **1998** Free packet station and bonus are eliminated, but RTTY/PSK31 are added as a 3rd FD mode. The 100 point bonus for VHF/UHF stations is deleted.